

X/2831/#

TRANSMITTAL FORM (to be used for all correspondence after initial filing) Total Number of Pages in this Submission 9

	ENCLOSURES	(check all that apply)
X Fee Transmittal Form	Drawing(s)	After Allowance Communication to
Fee Attached	Licensing-Related papers	Group Appeal Communication to Board of Appeals and Interferences
Amendment/Reply	Petition	Appeal Communication to Group
After Final	Petition to Convert to a Provisional Application	(Appeal Notice, Brief, Reply Brief) Proprietary Information
Affidavits/Declaration(s)	Power of Attorney,	Status Letter with appropriate copies
Extension of Time Request	Revocation, Change of Correspondence Address	X Other Enclosure(s) (please identify below) References D-1 thru D-30
Express Abandonment Request	Terminal Disclaimer	Return Postcard
X Information Disclosure Statement & Form PTO/SB/08	Request for Refund	
Certified Copy of Priority Documents	CD, Number of CDs	
Response to Missing Parts/ Incomplete Application	Remarks	
Response to Missing Parts Under 37 CFR 1.52 or 1.53		
SIGNATURE O	F APPLICANT, ATTORNE	CY, OR AGENT
Firm or Robert L. King		Registration No. 30,185
Signature Robe	A 1. King	
Date 1/19/200	5	
	EKTIFICATE OF MAILIN	
I hereby certify that this correspondence is be Service with sufficient postage as first class r Alexandria, VA 22313-1450 on the date listed	nail in an envelope addressed to: Co	O or deposited with the United States Postal mmissioner for Patents, P. O. Box 1450,
Typed or printed name Pat Thomas	_/	
Signature Lat	homas	Date /-2/-05

OIP E JO				
\ \(\siz\)			Complete if Known	
JAN 2 5 2005 5 FEE		Application Number	09/928,737	
	ιL	Filing Date	August 13, 2001	
Patent are subject to annual revision Applicant claims small entity status. See 37 CFR 1.27		First Named Inventor	Son K. Quan	
		Examiner Name	Hung V. Ngo	
		Group Art Unit	2831	
TOTAL AMOUNT OF PAYMENT	(\$) 180	Attorney Docket No.	SC09785T CD1	

METHOD OF PAYMENT (check all that apply)	FEE CALCULATION (continued)					
Check Credit card Money Order Other None	3. ADE	DITIONA	L FEES			
X Deposit Account:	Lar En		Sn En	nali fify		
Deposit Account Number 503079	Fee	Fee	Fee	Fee		
Deposit Account Name Freescale Semiconductor,	Code	(\$)	Code	(\$)	Fee Description	
Inc.	0000	(4)	5000	(0)	1 66 06361191011	
	1051	130	2051	65	O to the second second	
The Director is authorized to: (check all that apply) X Charge fee(s) indicated below X Credit any overpayments	1051	50	2051	25	Surcharge – lafe filling fee or oath Surcharge – late Provisional filling	-
Cledit any overpayments	1053	130	1053	130	Non-English specification	
Charge any additional fee(s) during the pendency of this application	1812	2520	1812	2520	For filing a request for ex parte Reexamination	
Charge fees(s) indicated below, except for the filing fee to the above-identified deposit account.	1804	920*	1804	920*	Requesting publication of SIR prior to Examiner action	
авоченияливей ферові ассоліть.	1805	1840°	1805	1840*	Requesting publication of SIR after Examiner action	
FEE CALCULATION	1251	110	2251	55	Extension for reply within first month	
TEL VALOULATION	1252	420	2252	210	Extension for reply within second month	
	1253	950	2253	475	Extension for reply within third month	
1. BASIC FILING FEE	1254	1480	2254	740	Extension for reply within fourth month	
	1255	2010	2255	1005	Extension for reply within fifth month	
Large Entity Small Entity	1401	330	2401	165	Notice of Appeal	
Fee Fee Fee Fee Code (\$) Fee Paid	1402 1403	330 290	2402 2403	165 145	Fifing a brief in support of an appeal Request for oral hearing	-
(4) (5)					Pettion to institute a public use	
1001 770 2001 385 Utility filing fee	1451 1452	1510 110	1451 2452	1510 55	proceeding Petition to revive – unavoidable	-
1001 770 2001 385 Utility filing fee	1452	1330	2452	965	Petition to revive – unintentional	-
1003 530 2003 265 Plant filing fee	1501	1330	2501	665	Utility issue fee (or reissue)	
1004 780 2004 385 Reissue filing fee	1502	480	2502	240	Design issue fee	
1005 160 2005 80 Provisional filing fee	1503	640	2503	320	Plant issue fee	
CUPTOTAL (4)	1460 1807	130 50	1460 1807	130 50	Peffions to the Commissioner Processing fee under 37 CFR 1 17(q)	-
SUBTOTAL (1) (S)	1806	180	1806	180	Submission of IDS	-
EXTRA CLAIM FEES Previously Extra Fee from	8021	40	8021	40	Recording each patent assignment	180
Paid** Claims below Fee Paid	0021		0021	40	per property (times number of properties)	
Total Claims - 20 = X 18 =	1809	770	2809	385	Filling a submission after final	
Independent Claims - 3 = X 86 =	1810	770	2810	385	rejection (37 CFR § 1.129(a)) For each additional invention to be	
Multiple Dependent 280 =					examined (37 CFR § 1 129(b))	
Large Entity Small Entity Fee Fee Fee Fee	1801	770	2801	385	Request for Continued Examination (RCE)	
Code (\$) Code (\$) Fee Description 1202 18 2202 9 Claims in excess of 20	1802	900	1802	900	Request for expedited examination of a design application	
1201 84 2201 42 Independent claims in excess of 3	Other fe	e (specify)			or a design approach.	
1203 280 2203 140 Multiple dependent claim, if not paid 1204 84 2204 42 "Reissue independent claims over original patent	<u> </u>					
1204 84 2204 42 *Reissue independent claims over original patent						
1205 18 2205 9 "Reissue claims in excess of 20 and over origina? patent						
SUBTOTAL (2) (S)	. Dodu	ced by Ba	oie Ciline	Foo Boir	SUBTOTAL (3) (5) 180	
"or number previously paid, if greater; For Reissues, see above.	Hedu	ceu dy ba	isic riling	ree Pak		
SUBMITTED BY					Complete (if applicable)	
Name (Print/Type) Robert L. King		ation No.	30,1	85	Telephone 512.9	96.6839
Signature Robert Z. Ky	~			D	ate ///9/2	005



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Application No.:

Son K. Quan et al. 09/928,737 Group Art Unit:

2831 Hung V. Ngo

Date Filed: Title: August 13, 2001 SEMICONDUCTOR PACKAGE AND METHOD THEREFOR

CERTIFICATE OF MAILING

INFORMATION DISCLOSURE STATEMENT (IDS)

Commissioner For Patents P.O. Box 1450 Alexandria, VA 22313-1450

SIR:

In accordance with 37 C.F.R. §1.56 and in compliance with 37 C.F.R. §1.98, the references listed on attached Form PTO/SBI08 and/or subsequently identified herein, are being submitted herewith for consideration by the United States Patent and Trademark Office. The Office hereby waives the requirement under 37 C/FR 1.98 (a)(2)(i) for submitting a copy of each cited U.S. patent and each U.S. patent application publication for all U.S. national patent applications filed after June 30, 2003 and for all international applications that have entered the national stage under 35 USC § 371 after June 30, 2003. See 37 CFR 1.491(b).

I COPIE

A legible copy of (i) each foreign patent; (ii) each publication or that portion which caused it to be listed; and (iii) all other information or that portion which caused it to be listed, is included herewith.

b. Any patents, publications or other information which are listed on PTO/SB/08 which are not enclosed herewith were previously cited by or submitted to the PTO in one of the following applications which has been relied upon for an earlier filing older under 35 U.S.C. \$120:

U.S. Serial Number

U.S. Filing Date

II. CONCISE EXPLANATION OF THE RELEVANCE (check at least one box)

Except as may be indicated below in (b) of this section, all of the patents, publications or other information are in the English language (concise explanation not required).

b. A concise explanation of the relevance of all patents, publications or other information listed that is not in the English language is as follows: English translation is provided for cited references D-12 and D-13.

c. The following additional information is provided for the Examiner's consideration:

III. CROSS REFERENCE TO RELATED APPLICATION(S)

The Examiner is advised that the following co-pending application(s) contain(s) subject matter that may be related to the present application. By bringing this (these) applications to the Examiner's attention, Applicant(s) does(do) not waive the confidentiality provisions of 35 U.S.C. \$122

01/28/2005 MGEBREM1 00980404503079 09928737

Filing Date

Art Unit

01 FC:1806

180.00 DA

FEES

IV THIS IDS IS BEING FILED LINDER 37 C.E.R. 61 97(b): (check one box)

	a. 🔲	within three months of the filing date of a national application other than a continued prosecution application under § 1.53(d) (37 C.F.R. §1.97(b)(1)). No fee or statement is required.
	b.	within three months of the date of entry of the national stage as set forth in § 1.491 in an international application (37 C.F.R. §1.97(b)(2)). No fee or statement is required.
	c.	before the mailing date of a first Office Action on the merits (37 C.F.R. §1.97(b)(3)). No fee or statement is required.
	d.	before the mailing date of a first Office Action after the filing of a request for continued examination under § 1.114 (37 C.F.R. § 1.97(b)(4)). No fee or statement is required.
v. 🔲	before th	SIS BEING FILED UNDER 37 C.F.R. §1.97(c): (check one box) e mailing date of any of a Final Office Action under 37 C.F.R. §1.113, a Notice of Allowance under 37 C.F.R. or an action that otherwise closes prosecution in the application (See 37 C.F.R. §1.97(c)). No statement; herefore, charge Deposit Account 503079, Freescale Semiconductor, Inc. the fee set forth in 37 C.F.R. §1.17(p). See the statement below. No fee is required.
VI. 🔯	_	S IS BEING FILED UNDER 37 C.F.R. §1.97(d):
VI. 🔼	on or bef	ore payment of the issue fee and is accompanied by the following:
	1) 2)	a statement under 37 C.F.R. §1.97(e) as provided below; and charge Deposit Account 503079, Freescale Semiconductor, Inc. the petition fee set forth in §1.17(p).
VII. 🗌		IENT UNDER 37 C.F.R. §1.97(e) (check only one box, if applicable)
	a.	ersigned hereby states that each item of the IDS was cited in a communication from a foreign Patent Office in a
	b.	counterpart foreign application not more than three months prior to the filing of IDS; or no item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application, and to knowledge of the person signing the statement after making
		reasonable inquiry, no item of information contained in the IDS was known to any individual designated in 37
	c.	C.F.R. 1.56(c) more than three months prior to the filing of this statement, or some of the litense of information contained in the IDS were cited in a communication from a foreign Patent Office. As to this information, the undersigned states that each item of information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application not more than three months prior to the filing of this IDS. As to the remaining information, the undersigned hereby states that no item of this remaining information contained in the IDS was cited in a communication from a foreign Patent Office in a counterpart foreign application or, to the knowledge of the person signing the statement after making reasonable inquiry, no item of information contained in the IDS was known to any individual designated in 37 C.F.R. 1.56(c) more than three months prior to the filing of this statement.
VIII.	PAYMEN	VT OF FEES A check in the amount of is enclosed for the above-identified fee(s).
		Please charge Deposit Account No. 503079, Freescale Semiconductor, Inc. in the amount of \$180.00 for
	\boxtimes	the above-indicated fee(s). If Applicant has overlooked any additional fees, or if any overpayment has been made, the Commissioner is
		hereby authorized to credit or debit Deposit Account 503079, Freescale Semiconductor, Inc. Two Copies of this paper are attached for Deposit Account charges and debits.
	T	the state of the state of a supply and the state of the s

The above references are being cited only in the interests of candor and without any admission that they constitute statution prior art or contain matter which anticipates the invention or which would render the same obvious, either singly or in a combination, to a person of ordinary skill in the art.

If the Examiner has any questions concerning this IDS, he/she is requested to contact the undersigned. If it is determined that this IDS has been filed under the wrong rule, the PTO is requested to consider this IDS under the proper rule (with a petition if necessary) and charge the appropriate fee to Deposit Account No. 503079, Freescale Semiconductor, Inc.

> Respectfully submitted, Son K. Quan et al.

Robert L. King Attorney for Applicant(s)

Reg. No. 30,185 Tel. 512.996.6839

FREESCALE SEMICONDUCTOR, INC. Enclosures: \boxtimes

Customer Number 23125

Information Disclosure Statement by Applicant References D-1 thru D-30 Foreign Search Report Other:



INFORMATION DISCLOSURE STATEMENT BY APPLICANT

 Complete It Known

 Agplication Number
 0.9928,737

 Filing Date
 August 13, 2001

 First Named Inventor
 Son K. Quan et al.

 Group Art Unit
 2381

 Examiner Name
 Hung V. Ngo

 Altoney Docket No.
 SC09785T CD1

(use as many sheets as necessary)
Sheet 1 3

			U. S. PATENT D	OCUMENTS	
Examiner Initials	Cite No. 1	Document Number Number -Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevan Passages or Relevant Figures Appear
'HN/	D-1	5,981,314	11-09-1999	Glenn et al.	
1	D-2	5,976,912	11-02-1999	Fukutomi et al.	
	D-3	5,729,437	06-17-1998	Hashimoto	
	D-4	5,450,283	09-12-1995	Lin et al.	
	D-5	5,280,193	01-18-1994	Lin et al.	
	D-6	4,890,383	01-02-1990	Lumbard et al.	
\top	D-7	4,530,152	07-23-1985	Roche et al.	
\top	D-8	3,606,673	09-21-1971	Overman	
1	D-9	3,444,441	05-13-1969	Helda et al.	
/HN/	D-10	3,413,713	12-03-1968	Helda et al.	
	<u> </u>				
				1	

FOREIGN PATENT DOCUMENTS						
Examiner Initials*	Cite No. 1	Foreign Patent Document Country Code ³ Number ⁴ Kind Code ² (if known)	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear	T 6
/HN/	D-11	EP 0 261 324 A1	03-30-1988	Bednarz et al.		
/HN/	D-12	JP 02-047855	02-16-1990	Akase		
/HN/	D-13	WO 95/26047	09-28-1995	Fukutomi et al.		
						-
						├-

Examiner		Date	00/40/0040	
Signature	/Hung Ngo/	Considere d	06/16/2010	

EXAMINER: Initial il reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation, if not in conformance and not considered. Include copy of this form with next communication to applicant.

*Unique citation designation number. *See Kinds of U.S. Paters Documents. *Enter Office that issued the document, by the two-letter code (WIPO Standard ST.5). *For Japanese patent documents, the indication of the year of the religing in the Emperor must produce the senial number of the patent document. *Yetrod document by the appropriate symbols as indicated on the document under WIPO Standard ST.1.6 (spossible *Applicant is to place a check must here to English Language Transfallors in sitiations.)

If you need assistance in completing the form, call 1-800-PTO-9199 (1-800-786-9199) and select option 2.



(use as many sheets as necessary)

Sheet

next communication to applicant.

INFORMATION DISCLOSURE

of

 Complete if Known

 Application Number
 0.9928.737

 Filing Date
 August 13, 2001

 First Named Inventor
 Son K. Quan et al.

 Group Art Unit
 2831

 Examiner Name
 Hung V. Ngo

 Attorney Dockst Number
 SC0978ST CD1

NON PATENT LITERATURE DOCUMENTS Cite No. 1 include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, Examiner serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. Initials* D-14 HOTTA, Yuji et al.; "Foil covered PACkage (FPAC): A New Package concept"; Electronic Components & Techonogy Conference: 1996: Cover Page & pp 1258-1264; IEEE Catalog No. 96CH35931. /HN/ YIP, Laurene et al; "Package Warpage Evaluation for High Performance PQFP"; 45th Electronic Components and Technology Conference; 1995; Cover Page & pp 229-233; IEEE Catalog No. 95CH3582-0. /HN/ HYSOL® FP4451 Flow Control Dam Product Bulletin; Dexter Electronic Materials Division; 2 pgs; March, /HN/ 1995. HYSOL® FP4650 Liquid Encapsulant Product Bulletin; Dexter Electronic Materials Division; 4 pgs; May. /HN/ 1995 D-18 BOUTIN, Lynda: "Mold Compound Study for Plastic Ball Grid Array Applications"; Proceedings of the Technical Program, NEPCON EAST '95"; June 12-15, 1995; Cover Page & pp 279-290; Boston. /HN/ BURKHART, Art et al.; "New Generation Encapsulants For Chips On Low Cost First Level Substrates"; D-19 Dexter Technical Paper: February, 1994; pp 1-8; USA /HN/ MANZIONE, Louis T.: "Plastic Packaging of Microelectronic Devices": AT&T Bell Laboratories Publication: 1990; 4 pas. /HN/ McPHERSON, J.W. et al: "A Novel Thermal Expansion Matched Heatspreader for Plastic Encapsulation of Silicon Chips"; 25th Annual Proceedings, Reliability Physics 1987; April 7-9, 1987; Cover Page & pp 224-/HN/ 228: IEEE Catalog No. 87CH2388-7. MURPHY, William: "Custom Molded Cavities": Technical Papers, Regional Technical Conference, Society of Plastics Engineers, Inc.; March 6-7, 1985; 6 pgs. /HN/

Examiner Signature	/Hung Ngo/	Date Considered	06/16/2010
EXAMINER: Initial if	reference considered, whether or not citation is in conformance with MPEP 609.	Draw line through citation, if not	in conformance and not considered. Include copy of this form with

** Unliga citation designation number. *See Kinds of U.S. Patert Documents. *First Office has based the document, by he No-letter code (WPD Standard \$7.3). *For Japanese patent documents, be inactioned on the year of he legic of the Empore company proceed he see since have of the pages of comment. *Kind of document, by the appropriate symbols as indicated on the document under WPD Standard \$7.1 it is possible. **Applicant is to place a check mark here if English Languago Translation's attached.

**Standard \$7.1 it is possible. **Applicant is to place a check mark here if English Languago Translation's attached.

**Was under the process of the page of the process of the page of the



INFORMATION DISCLOSURE STATEMENT BY APPLICANT

(use as many sheets as necessary) Sheet 13 of T 3

Complete if Known				
Application Number	09/928,737			
Filing Date	August 13, 2001			
First Named Inventor	Son K. Quan et al.			
Group Art Unit	2831			
Examiner Name	Hung V. Ngo			
Attorney Docket Number	SC09785T CD1			

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. 1	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.	Τż	
/HN/	D-23	MANGES, Prof. Dr. Georg et al.; "Electric-discharge machining (EDM);; How to Make Injection Molds, 1983; 5 pgs; Hanser Publishers.		
/HN/	D-24	SCHUMACHER, Dr. B.; "The Significance of Electrical Discharge Machining (EDM) IN Mold Making"; Mold- Making Handbook for the Plastics Engineer, Chapter 13, 1983; 17 pgs; MacMillan Publishers, NY.		
/HN/	D-25	HULL, John L.; "Equipment and Techniques for Plastic Encapsulation of Electrical and Electronic Devices"; 35" Annual Technical Conference, Society of Plastics Engineers; April 24-27 1978; USA.		
/HN/	D-26	CORNER, Harold L; "The Moldmaking Trades: The Key to Success or Failure of the Plastics Industry"; 36 th Annual Technical Conference, Society of Pastics Engineers; April 24-27, 1978; Cover Page & pp 172-174; USA.		
/HN/	D-27	FORTIN, M.J.; "Automated Rotary Transfer Encapsulation of Electronic Parts", 28th Annual Technical Conference, Society of Plastics Engineers, May 4-7, 1970; Cover Page & pp 180-161; USA.		
/HN/	D-28	KLUZ, John; "Methods of Producing Cores and Cavities"; Moldmaking and Die Cast Dies for Apprentice Training; Chapter VIII; 1997; National Tool, Die and Precision Machining Association; Washington, D.C.		
/HN/	D-29	JAMESON; E.C.; "Electrical Discharge Machining of Mold Cavities ands Cores", Technical Papers, SPE Regional Technical Conference: Tooling for Plastics-Design and Construction' September 30, 1965; Cover Page & pp 17-21; USA.		
/HN/	D-30	ROSS, Milton I.; "Electric Discharge Cutting of Mold Components"; Technical Papers, SPE Regional Technical Conference-Advances in Moldmaking and Mold Design; April 17, 1964; Cover Page pp 14-18, Society of Plastics Engineers.		

Signature	/Hung Ngo/	Considered	00/10/2010	
EXAMINER: Initial if	reference considered, whether or not citation is in conformance with MF	PEP 609. Draw line through citation, il not	in conformance and not considered.	Include copy of this form with
next communication	to applicant.			

Date

^{*}Unique citation designation number * See Kinds of U.S. Patient Documents, *Enter Office that issued the document, by the two-letter code (WIPO Standard ST 3), *For Japanese patient documents, the indication of the year of the regno if the Emperor must procede the sent number of the patient document. Yand document by the appropriate symbols as indicated on the document under WIPO Standard ST, 16 if possible, *Applicant is to patience a check mark the Telegishul paragase Praintable in statement.

If you need assistance in completing the form, call 1+800-PTO-9199 (1+800-766-9199) and select option 2.